

**REMARKS**

Applicants thank the Examiner for examining the Application. Applicants have amended claims 1, 11, 19, 29, 37, 47, 55, 63, and 71 to more clearly define the statutory subject matter of these claims. Applicants have also added new claim 81, support for which may be found throughout the specification, and the addition of which does not constitute new matter. With these amendments, claims 1-81 are now pending.

**Claim Rejections – 35 U.S.C. § 101**

The Examiner rejected claims 1, 11, 19, 29, 37, 47, 55, 63, and 71, as well as their corresponding dependent claims, under 35 U.S.C. § 101 because the invention is directed non-statutory subject matter.

Applicants have amended Applicants' independent claims 1, 11, 19, 29, 37, 47, 55, 63, and 71 to show how each is a practical application that produces a tangible result. For example, Applicant's independent claim 1 has been amended as follows:

In a computer system,[[A]] a method of applying interval-based adjustments to data in a database, wherein the database is stored within, and accessible via, the computer system, the method comprising:

storing a plurality of raw data values organized as a series in a first database structure in the computer system;

for the series of raw data values, storing a plurality of intervals of adjustment data in a second database structure in the computer system, each interval of adjustment data including an adjustment value to be applied to raw data values over a range specified in the series; and

associating the first and second database structures in the computer system so the adjustment value is applied to the series of raw data values in response to retrieval of an adjusted data value from the database in the computer system to provide a user, via the computer system, the adjusted data values corresponding to said raw data values and said adjustment value.

Similarly, Applicants' independent claim 11 has been amended as follows:

In a computer system,[[A]] a method of applying interval-based adjustments to data in a database, wherein the database is stored within, and accessible via, the computer system, the method, comprising:

storing a plurality of raw data values organized as a time series in a first database structure in the computer system;

for the time series, storing a plurality of intervals of time-based adjustment data, in a second database structure in the computer system, each interval of time-based adjustment data including an adjustment value to be applied to raw data values over a specified range in the series;

creating a view of the database in the computer system to include the first and second database structures; and  
in response to a query for adjusted data values, input to the computer system by a user, using the view to apply the adjustment value to the raw data values during retrieval of the raw data from the database in the computer system to provide the user with the adjusted data values corresponding to said raw data values and said adjustment value via the computer system.

In Applicants' amended independent claims 1 and 11, respectively, each of the steps takes place in a computer system and produces a tangible result to a user, via the computer system, namely adjusted data values corresponding to said raw data values and said adjustment value. Applicants' independent claims 19, 29, 37, 47, 55, 63, and 71 have all been amended in a similar manner.

Applicants believe these amendments sufficiently overcome the Examiner's rejection, and that all claims are now directed towards statutory subject matter.

#### Claim Rejections – 35 U.S.C. § 102(e)

The Examiner rejected claims 1-80 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,321,212 to Lange.

Applicants' amended independent claim 1 requires, among other things, associating the first and second database structures in the computer system so the adjustment value is applied to the series of raw data values *in response to retrieval of an adjusted data value from the database* in the computer system to provide a user, via the computer system, the adjusted data values corresponding to said raw data values and said adjustment value (emphasis added). The Examiner cited to col. 91, lines 8-11, 14-18, and 26-31, as well as elements 261-267 of Figs. 2 and 4, as disclosing this limitation.

Applicants respectfully disagree with the Examiner. As stated above, Applicants' amended independent claim 1 requires that the association of the first and second database structures occur *in response to retrieval of an adjusted data value from the*

*database* (emphasis added). Nowhere in the cited text of Lange does Lange disclose associating the first and second database structures in response to retrieval of an adjusted data value from the database. Indeed, the lines of Lange cited by the Examiner as disclosing this limitation read as follows:

In the preferred embodiment depicted in FIG. 3, a group of DBAR contingent claims has trading periods 310, 320, 330, and 340, with trading period start date 311, 321, 331, 341 respectively, followed by a predetermined time interval by each trading period's respective trading end dates 313, 323, 333 and 343.

In the preferred embodiment, during each trading period the transaction server 240 running JAVA code implementing the DRF for the group of DBAR contingent claims adjusts returns immediately in response to changes in the amounts invested in each of the defined state.

In a preferred embodiment, the adjusted returns calculated during a trading period, i.e., intra-trading period returns, are of informational value only--only the returns which are finalized at the end of each trading period are used to allocate gains and losses for a trader's investments in a group or portfolio of groups of DBAR contingent claims.

This text does not disclose or even suggest that an adjusted data value is retrieved from a database, and thus cannot disclose or even suggest that anything happens in response to retrieval of an adjusted data value from the database. As Applicants' amended independent claim1 requires associating the first and second database structures in the computer system so the adjustment value is applied to the series of raw data values in response to retrieval of an adjusted data value from the database, and Lange does not disclose this limitation, for at least this reason, Lange does not disclose Applicants' amended independent claim 1. Thus, Applicants' amended independent claim 1 is allowable over Lange.

Applicants' amended independent claims 19 and 37 contain limitations similar to those of Applicants' amended independent claim 1. Therefore, for at least the reasons given above with respect to Applicants' amended independent claim 1, Lange does not disclose Applicants' amended independent claims 19 and 37. Thus, Applicants' amended independent claims 19 and 37 are themselves allowable over Lange.

Applicants' dependent claims 2-10 and 79-80, 20-28, and 38-46 depend from, respectively, Applicants' allowable independent claims 1, 19, and 37. Therefore, for at

least the reasons given above, Applicants' dependent claims 2-10 and 79-80, 20-28, and 38-46 are themselves allowable over Lange.

Applicants' amended independent claim 11 requires, among other things, creating a view of the database in the computer system to include the first and second database structures. The Examiner cites to col. 92 lines 39-42 of Lange, which state:

In the preferred embodiment depicted in FIG. 4, databases 261-267 each contain such tables and other relational database entities and objects necessary or desirable to implement an embodiment of the present invention.

The Examiner then goes on to state that "Lange specifically teaches relational database tables, and other relational database entities and objects [col 92, line 39-42]," Office Action page 11 lines 9-11, which is clearly supported by the text of Lange shown above. However, the Examiner continues by stating, "further creating views is a common knowledge in relational database art, because create table, create view(s), create schema, create domain and like are integral part of relational database(s), also it is noted that Lange specifically suggests for example relational database software operating on the data storage devices comprises relational database [col 91, line 34-35], therefore, crate [sic] table, create view(s) are integral part of Lange's teaching," , Office Action page 11 lines 11-16. Applicant respectfully submits that this is an improper rejection under 35 U.S.C. § 102(e). As the Examiner knows, rejections under 35 U.S.C. § 102 require that the cited prior art reference actually disclose each and every limitation present in the claims. Common knowledge in the art, as well as something being an integral part of the art's teaching, is irrelevant to rejections under 35 U.S.C. § 102. Nowhere in the text of Lange does Lange actually disclose creating a view of the database in the computer system to include the first and second database structures, as required by Applicants' independent claim 11. Thus, for at least the reasons given above, Applicants' independent claim 11 is not anticipated by Lange, and is therefore allowable over Lange.

Further, Applicants' amended independent claim 11 requires, among other things, in response to a query for adjusted data values, input to the computer system by a user, using the view to apply the adjustment value to the raw data values during

retrieval of the raw data from the database in the computer system to provide the user with the adjusted data values corresponding to said raw data values and said adjustment value via the computer system. However, as stated above, Lange does not disclose creating a view. Therefore, Lange cannot disclose using the view to apply the adjustment value to the raw data values during retrieval of the raw data from the database, as required by Applicants' independent claim 11. Therefore, for at least this reason, Lange does not disclose Applicants' independent claim 11 and thus Applicants' independent claim 11 is allowable over Lange.

Applicants' amended independent claims 29, 47, 55, 63 and 71 contain limitations similar to those of Applicants' amended independent claim 11. Therefore, for at least the reasons given above with respect to Applicants' amended independent claim 11, Lange does not disclose Applicants' amended independent claims 29, 47, 55, 63 and 71. Thus, Applicants' amended independent claims 29, 47, 55, 63 and 71 are themselves allowable over Lange.

Applicants' dependent claims 12-18, 30-36, 48-54, 56-62, 64-70, and 72-78 depend from, respectively, Applicants' allowable independent claims 11, 29, 47, 55, 63 and 71. Therefore, for at least the reasons given above, Applicants' dependent claims 12-18, 30-36, 48-54, 56-62, 64-70, and 72-78 are themselves allowable over Lange.

### CONCLUSION

Applicants believe this Amendment and Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Accordingly, Applicants request allowance of the application.

Applicants hereby petition for any extension of time required to maintain the pendency of this case. If there is any fee occasioned by this response that is not paid, please charge any deficiency to Deposit Account No. 50-3735.

Page 20 of 20

Should the enclosed papers or fees be considered incomplete, Applicants respectfully request that the Patent Office contact the undersigned collect at (508) 616-9660, in Westborough, Massachusetts.

Applicants invite the Examiner to contact the Applicants' undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,



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